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EXAMINER
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HOANG, PHUONG N

ART UNIT	PAPER NUMBER
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2194

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/663,564

Applicant(s)

SLAUGHTER ET AL.

Examiner

Phuong N. Hoang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 February 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 66 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 23, 42 - 43, and 47 - 49 is/are allowed.  
6) ☒ Claim(s) 1 - 14, 16 - 22, 24 - 41, 44 - 46, 50 - 66 is/are rejected.  
7) ☒ Claim(s) 15 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

1. Claims 1 – 66 are presented for examination.

***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claim 51 is not limited to tangible embodiments. In view of applicants' disclosure, specification page 185, the medium is not limited to tangible embodiments, instead being defined as including both tangible embodiments (CD-ROM, tape) and intangible embodiments (signals and wireless link). As such, the claim is not limited to statutory subject matter and is therefore non-statutory.

4. Claims 52 - 60 are dependent claims of claim 51. They are rejected for the reason above.

5. Claim 61 is not limited to tangible embodiments. In view of applicants' disclosure, specification page 185, the medium is not limited to tangible embodiments, instead being defined as including both tangible embodiments (CD-ROM, tape) and intangible embodiments (signals and wireless link). As such, the claim is not limited to statutory subject matter and is therefore non-statutory.

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6. Claims 62 - 66 are dependent claims of claim 61. They are rejected for the reason above.

7. Claim 64 is not limited to tangible embodiments. In view of applicants' disclosure, specification page 185, the medium is not limited to tangible embodiments, instead being defined as including both tangible embodiments (CD-ROM, tape) and intangible embodiments (signals and wireless link). As such, the claim is not limited to statutory subject matter and is therefore non-statutory.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 1, 5, 10, 13 – 14, 16 – 21, 24 – 26, 44 – 46, 50 – 51, 54, 58 – 63, and 65 - 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buckle, UK patent no. 2,332,288 A in view of Wolf, US patent no. 6,668,271.**

10. Buckle and Wolf references were cited in the last office action.

11. **As to claim 1**, Buckle teaches a method for representing a state of a process in a data representation language in a distributed computing environment, the method comprising the steps of:

executing the process within a first device (inherent when transporting the agent from L1);

converting a current state process into a language representation of the current process (record object and object states (ie an agent) as a stream of data ..... ACL message string, page 38) wherein the computation state of the process comprises information about the execution state of the process within the first device;

storing the language representation of the current computation process (the agent code in the form of ACL message is stored, page 39 lines 1 - 10);

wherein the representation language representation of the current computation state of the process is configured for use in reconstituting (re-constructing the byte stream back into an object resident, page 38 lines 30 - page 39 lines 5) the process and resuming execution of the process (continue execution, page 38 lines 10 - 20).

Buckle does not explicitly teach that the language is the data representation language.

Wolf teaches the agent carrying data representation language including the execution state of the process and reconstituting the process (agent.xml map to, col. 2 lines 1 - 10, col. 3 lines 25 - 45, col. 4 lines 25 - 35, col. 5 lines 1 - 8, and col. 6 lines 1 - 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Buckle and Wolf's system because Wolf's xml would be the well-known language for streaming data in a distributed system and used for the carrying Buckle's agent with its state to be enable for interpretation between applications and organizations.

12. **As to claim 5**, Buckle teaches

a second device (remote host, page 38 lines 10 - 20) accessing the stored data representation language representation of the current computation state of the process (the content is decoded and operated at remote host, page 38 lines 15 - page 39 line 10);

reconstituting (re-constructing the byte stream back into an object resident in remote host, page 38 lines 30 - page 39 lines 5) the process at the current computation state within the second device from the data representation language representation of the current computation state of the process; and

resuming execution of the process within the second device from the current computation state (continue execution at remote host, page 38 lines 10 - 20).

13. **As to claim 10**, Buckle teaches

the first device accessing the stored data representation language representation of the current computation state of the process from the space service (L1 transported

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agent to L2 residing on a single machine, p. 15 lines 20 - 29, and page 38 lines 5 - page 39 lines 10);

reconstituting (re-constructing the byte stream back into an object resident residing on a single machine, p. 15 lines 20 - 29, and page 38 lines 30 - page 39 lines 5) the process at the current computation state within the first device from the data representation language representation of the current computation state of the process; ending execution of the process within the first device (ending when message is transferred), resuming execution of the process within the first device from the current computation state (continue execution at L2 residing on a single machine, p. 15 lines 20 - 29 and p. 38 lines 10 - 20).

14. **As to claim 13**, Buckle modified by Wolf teaches the steps of wherein the current computation state of the process includes one or more objects of the process, wherein an object is an instance of a class in a computer programming language, and wherein said converting a current computation state of the process into a data representation language representation of the current computation state comprises:

converting the one or more objects (Buckle; record object and object states (ie an agent) as a stream of data, page 38 lines 10 - 20) into data representation language representations of the one or more objects (Wolf; agent.xml, col. 2 lines 1 - 10, col. 3 lines 25 - 45, col. 4 lines 25 - 35, col. 5 lines 1 - 8, and col. 6 lines 1 - 5);

including the data representation language representations of the one or more objects in the data representation language representation of the current computation

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state of the process (packing up agent and its state into the content parameter of an ACL message, page 38 lines 12 – 15);

wherein the data representation language representations of the one or more objects are configured for use in generating copies of the one or more objects (objects can be recovered back into object resident in remote host, p. 39).

15. **As to claim 14**, Buckle teaches the step of wherein the computer programming language is the Java programming language (Java, page 2 lines 25 - 30).

16. **As to claims 16 and 17**, Buckle teaches the step of wherein the process is executing within a virtual machine (Java would require Java virtual machine, page 2 lines 25 - 30) executing within the first device.

17. **As to claim 18**, Wolf teaches the step of data representation language is extensive markup language (XML, col. 4 lines 25 – 35).

18. **As to claim 19**, Buckle teaches a method for representing a state of a process in a data representation language in a distributed computing environment, the method comprising the steps of:

executing the process within a first device (inherent when transporting the agent from L1)



converting a current state process into a language representation of the current process (record object and object states (ie an agent) as a stream of data ..... ACL message string, page 38) wherein the computation state of the process comprises information about the execution state of the process within the first ;

sending the language to a second device (the ACL message is transported to a second location L2 on a remote host, page 38).

reconstituting (re-constructing the byte stream back into an object resident in remote host, page 38 lines 30 - page 39 lines 5) the process at the current computation state within the second device from the language representation of the current computation state of the process; and

resuming execution of the process within the second device from the current computation state (continue execution at remote host, page 38 lines 10 - 20).

Buckle does not explicitly teach that the language is the data representation language.

Wolf teaches the agent carrying data representation language including the execution state of the process and reconstituting the process (agent.xml map to col. 2 lines 1 - 10, col. 3 lines 25 - 45, col. 4 lines 25 - 35, col. 5 lines 1 - 8, and col. 6 lines 1 - 5).

19. **As to claims 20 and 21**, Buckle modified by Wolf teaches the steps of wherein said sending the data representation language representation of the current computation state of the process to a second device comprises sending the data

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representation language representation in one or more messages to the second device  
(send messages to remote host, page 38).

20. **As to claims 24 and 25**, see rejection for claims 16 and 17 above.

21. **As to claim 26**, see rejection for claim 18 above.

22. **As to claim 44**, it is the system claim of claim 19. See rejection for claim 19 above.

23. **As to claim 45**, see rejection for claim 20 above.

24. **As to claim 46**, see rejection for claim 21 above.

25. **As to claim 50**, see rejection for claim 18 above.

26. **As to claim 51**, it is the software claim of claim 1. See rejection for claim 1 above.

27. **As to claim 54**, see rejection for claim 5.

28. **As to claim 58**, see rejection for claim 10 above.

29. **As to claim 59**, see rejection for claim 116 above.
30. **As to claim 60**, see rejection for claim 18 above.
31. **As to claim 61**, it is the software claim of claim 19. See rejection for claim 19 above.
32. **As to claims 62 and 63**, see rejection for claims 20 and 21 above.
33. **As to claim 65**, see rejection for claim 24 above.
34. **As to claim 66**, see rejection for claim 18 above.
35. **Claims 2 – 4, 6 – 8, 27 – 33, 36 – 41, 52 – 53, and 55 - 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buckle, UK patent no. 2,332,288 A in view of Wolf, US patent no. 6,668,271, and further in view of Matsumoto, US patent no. 6,763,334.**
36. **Matsumoto reference was cited in the last office action.**

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37. **As to claim 2**, Buckle teaches the steps of wherein the data representation language representation of the current computation state of the process is stored to a space using a space service (space used to store agent code of arrived stream, page 39 lines 1 - 10) wherein the space is operable to store documents including data representation language documents.

However, Buckle and Wolf do not explicitly teach a space service wherein the space is operable to store documents including data representation language documents in the distributed computing environment.

Matsumoto teaches the step of a space service (ad space, col. 6 lines 55 - 65, col. 7 lines 5 - 10, and lines 50 - 60) operable to store and retrieve documents to the space for processes in the distributed computing environment.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Buckle, Wolf, and Matsumoto's system because Matsumoto's space service would provide a space for keeping data to be accessed and retrieved in the distributed system.

38. **As to claims 3 and 4**, Buckle modified by Matsumoto teaches the steps of wherein said storing the data representation language representation of the current computation state of the process comprises sending (transported, page 38 lines 15 - 20) the data representation language representation to the space service (ad space, col. 6 lines 55 - 65, col. 7 lines 5 - 10, and lines 50 - 60) in one or more messages.

39. **As to claims 6 and 7**, see the rejection for claim 2 above.

40. **As to claim 8**, Matsumoto teaches the steps of  
generating an advertisement (define advertisements, col. 6 lines 25 -35 and col.  
7 lines 50 - 60) for the data representation language representation, wherein the  
advertisement comprises information to enable access to the stored data representation  
language representation (advertisement are stored within internal registry, col. 6 lines  
50 - col. 7 lines 20), and wherein the second device accessing the stored data  
representation language representation comprises:

the second device accessing the advertisement (access by the advertisers, col. 5  
lines 10 - 20) for the stored data representation language representation;

the second device locating the stored data representation language  
representation using the information in the advertisement (service provider uses  
advertisement to look up for client requests, col. 6 - 7).

It would have been obvious to one of ordinary skill in the art at the time the  
invention was made to combine the teaching of Buckle and Jagannathan and Graham's  
system because the Graham's service advertisement provide a unique protocol to  
maximize the number of clients that can utilize the services.

41. **As to claim 27**, Buckle teaches the steps of:

a first device (host which sends agent, page 38) operable to execute the process;

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a second device (remote host, page 38) comprising:

- a space operable to store documents including data representation language documents (space to store the ACL message at the location L2, page 39 lines 1 - 10);

- a space service operable to store and retrieve documents to the space for processes (agent can operate at location L2, page 39 lines 1 - 10);

wherein the first device is configured to:

- convert a current computation state of the process into a language representation of the current computation state (record object and object states (ie an agent) as a stream of data, page 38) wherein the computation state of the process comprises information about the execution state of the process within the first device;

- send the language representation of the current computation state of the process to the space service (the ACL message is transported to and stored at second location L2, page 38 and 39);

wherein the space service is operable to store the language representation of the current computation state of the process to the space (the ACL message is stored at the location L2, page 39 lines 1 - 10), and wherein the language representation of the current computation state of the process is configured for use in reconstituting the process (re-constructing the byte stream back into an object resident, page 38 lines 30 - page 39 lines 5) and resume execution of the process (continue execution, page 38 lines 10 - 20).

Buckle does not explicitly teach that the language is the data representation language and the space is used in the distributed computing system.

Wolf teaches the agent carrying data representation language including the execution state of the process and reconstituting the process (agent.xml map to col. 2 lines 1 - 10, col. 3 lines 25 - 45, col. 4 lines 25 - 35, col. 5 lines 1 - 8, and col. 6 lines 1 - 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Buckle and Wolf's system because Wolf's xml would be the well-known language for streaming data in a distributed system and is enable for interpretation between applications and organizations.

Buckle and Wolf do not teach the step of the space service (ad space, col. 6 lines 55 - 65, col. 7 lines 5 - 10, and lines 50 - 60) operable to store and retrieve documents to the space for processes in the distributed computing environment.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Buckle, Wolf, and Matsumoto's system because Matsumoto's space service would provide a space for keeping data to be accessed and retrieved in the distributed system.

42. **As to claims 28 and 29**, see rejection for claims 6 and 7.

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43. **As to claim 30**, Wolf teaches a third device (an distributed system with internet communication would comprise many computer devices, col. 1 lines 60 – col. 2 lines 10).

44. **As to claim 31**, Matusomo teaches space services (ad space, col. 6 lines 55 - 65, col. 7 lines 5 - 10, and lines 50 - 60).

45. **As to claim 32**, Wolf teaches the messages are in the data representation language (xml, col. 2 lines 1 - 10, col. 3 lines 25 - 45, col. 4 lines 25 - 35, col. 5 lines 1 - 8, and col. 6 lines 1 - 5).

46. **As to claim 33**, see rejection for claim 19 above. This is the reserve process that the first device at L1 location is able to receive and re-instructing the ACL message as being processed at location L2 as being processed at L2.

47. **As to claims 36 - 37**, see rejection for claims 13 - 14 above respectively.

48. **As to claims 38 and 39**, see claims 16 and 17 above.

49. **As to claim 40**, see rejection for claim 18 above.



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50. **As to claim 41**, it is the system claims of claims 1 and 8. See rejection for claims 1 and 8 above.

51. **As to claims 52 and 53**, see rejection for claims 2 and 3 above.

52. **As to claim 55**, see rejection for claim 6 above.

53. **As to claim 56**, see rejection for claim 8 above.

54. **Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Buckle, UK patent no. 2,332,288 A in view of Wolf, US patent no. 6,668,271, and further in view of Jagannathan, US patent no. 6,496,871.**

55. Jagannathan was cited in the last office action.

56. **As to claim 11**, Buckle and Wolf do not explicitly teach the steps of wherein the current computation state of the process includes one or more threads of the process.

Jagannathan teaches the steps of one or more threads (Jagannathan; threads, col. 11 lines 7 – 20 and col. 12 lines 28 – 35) in the data representation language representation of the current computation state, wherein the information describing the one or more threads is configured for use in restarting the one or more threads (it is

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obvious that the threads restart when the process resume execution) when resuming execution of the process.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Buckle, Wolf, and Jagannathan's system because Jagannathan's threads would be necessary to run the agent process.

**58. Claims 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Buckle, UK patent no. 2,332,288 A in view of Wolf, US patent no. 6,668,271, and further in view of Matsumoto, US patent no. 6,763,334, and further in view of Jagannathan, US patent no. 6,496,871.**

**59. As to claim 34, see rejection for claim 11 above.**

**60. Claims 12, 22, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buckle, UK patent no. 2,332,288 A in view of Wolf, US patent no. 6,668,271, and further in view of Edward "Core Jini" pages 405 – 410.**

**61. Edward was cited in the last office action.**

**62. As to claim 12, Buckle and Wolf do not teach the steps of wherein the current computation state of the process includes one or more leases to services held the**

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process, and wherein the converting a current computation state of the process into a data representation language representation of the current computation state comprises:

including information describing the one or more leases in the data representation language representation of the current computation state, wherein the information describing the one or more leases is configured for use in reestablishing the one or more leases to services for the process when resuming execution of the process.

Edward teaches including information describing the one or more leases (leases, pages 405 – 410), wherein the information describing the one or more leases is configured for use in reestablishing the one or more leases to services (renewing a lease) for the process when resuming execution of the process.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Buckle, Wolf, and Edward's system because Edward's lease is the data necessary to know how long the data available for accessing the resources.

62. **As to claim 22**, see claim 12 above.

63. **As to claim 35**, see rejection for claim 12 above.

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**64. Claims 9 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buckle, UK patent no. 2,332,288 A in view of Wolf, US patent no. 6,668,271, and further in view of Matsumoto, US patent no. 6,763,334, and further in view of Orbanes, US patent no. 6,751,620.**

**65. As to claim 9**, this is the method claim of claims 1 and 8. See rejection for claims 1 and 8 above. Buckle, Wolf, and Matsumoto doest not teach the step of space service is operable to store and retrieve documents including advertisement.

Orbanes teaches the step of space service (space contains data objects for the advertisement, col. 20 lines 35 – 55) is operable to store and retrieve (searching or selecting) documents including advertisement.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Buckle, Wolf, Matsumoto, and Orbanes's system because Orbanes's service space would provide space to hold advertisements for retrieving the documents in response to the user selecting.

**66. As to claim 57**, this is the medium claim of claim 9. See rejection for claim 9 above.

### ***Response to Arguments***

**67.** Applicant's arguments, filed on 2/7/05, with respect to claims 1 – 8, 10 – 22, 24 – 41, 44 – 46, 50 – 56 – 58 – 63 have been fully considered but they are not persuasive;

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and with respect to claims 9 and 57 have been considered but are moot in view of the new ground(s) of rejection.

68. Applicant argued in substance that

- (1) Wolf fails to teach converting a current computation state of a process into .....data representation language representation of the current computation state of the process.
- (2) Wolf does not suggest modifying Buckle's CORBA based agent mobility system.
- (3) Wolf's agent would not apply to the binary agent code transfer in Buckle's system.
- (4) Examiner failed to provide proper motivation to combine Buckle and Wolf.

69. Examiner respectfully disagreed with applicant's remark.

As to point 1, examiner did not cite Wolf, alone, teaches the limitation converting a current computation state of a process into ..... data representation language representation of the current computation state of the process. Buckle teaches converting to current state process into a language of the current process (record object and object states (ie an agent) as a stream of data...ACL message string, page 38). Wolf teaches an agent migration with its state in data representation language (agent.xml, col. 2 lines 1 - 10, col. 3 lines 25 - 45, col. 4 lines 25 - 35, col. 5 lines 1 - 8,

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and col. 6 lines 1 - 5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Buckle and Wolf's system because Wolf's agent.xml would be the well-known language for streaming data in a distributed system, and therefore, used for Buckle's agent with its state to be enable for interpretation between applications and organizations.

As to claim 2, applicant did not claim CORBA based agent mobility system.

As to point 3, Wolf's agent would apply to the binary agent code transfer in Buckle's system because xml is also a type of code or language.

As to point 4, applicant admitted that Buckle and Wolf are combinable in page Again, Buckle and Wolf can be combined because they all teach the mobile agent systems.

### ***Allowable Subject Matter***

70. Claims 23, 42 – 43, 47 – 49, and 64 are allowed.

### ***Conclusion***

71. The prior art made of record but not relied upon request is considered as applicant's disclosure.

Heller "JavaSpaces", 9-1999, demonstrating JavaSpace service.

72. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong N. Hoang whose telephone number is (571)272-3763. The examiner can normally be reached on Monday - Friday 9:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571)272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ph  
June 3, 2005

MENG-AT. AN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER